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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,414	04/15/2005	Ronny Losfeld	016782-0324	7979
22428 7590 04/06/2007 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER SAVAGE, JASON L	
			ART UNIT	PAPER NUMBER
			1775	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/06/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/531,414

Applicant(s)

LOSFELD ET AL

Examiner

Jason L. Savage

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20050415.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Specification/Drawings

It is noted that the abstract, specification and drawings filed with the present Application are based on PCT/EP01/14648 as opposed to the priority document cited on the oath of PCT/EP03/50691. As such, these documents are objected to.

It appears the only documentation commensurate in scope with priority document PCT/EP03/50691 is the substituted claim listing provided on 4-15-05 (referenced with Attorney Docket No. 016782-0324).

Since the priority documents which were submitted are English Language versions, the case has been Examined using the priority documents for the abstract, specification and drawings in lieu of those documents which appear to be drawn to different subject matter.

New copies of the abstract, specification and drawings should be submitted to replace those presently in the case so as to be commensurate in scope with the priority document PCT/EP03/50691. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3-4 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The limitation in claim 3 that the short metal fibers are three-dimensionally orientated is indefinite since it is unclear what type of structure Applicant is claiming. Are the fibers intended to be oriented in a specific alignment, randomly oriented or some other configuration? For the purposes of examination, the claim has been treated as meaning the fibers are randomly oriented within the layer.

Regarding claim 4, the limitation that the first layer is sintered is indefinite since it is unclear if Applicant intends if the first layer is sintered prior to the sintering step to join the layers together or if the first layer which has been subjected to the joining sintering would meet the limitation of being sintered.

Regarding claim 10, the limitation that the second layer comprises between 20 and 80% short metal fibers **and/or** metal powder particles is indefinite since claim 1 requires the inclusion of short metal fibers in the second layer. The claim limitation has been treated as meaning --the second layer comprises between 20 and 80% of short metal fibers or 20 and 80% of short metal fibers and metal powder particles, and further comprises--

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 11-12 and 14-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Morimoto (US 4,729,871).

Morimoto teaches forming a composite structure such as a filter which may comprise a plurality of porous layers superposed and sintered together (col. 4, ln. 21-31). Morimoto further teaches that at least one of the layers comprises short metal fibers (col. 3, ln. 8-34). Regarding the limitation in claim 1 that a second layer comprises a self-supporting layer of sintered shot metal fibers which is sintered together with a porous metal first layer, the claims are drawn to an article, not the method of making. The layer of Morimoto which is superposed with at least another layer which is subsequently sintered would result in the layer comprising short fibers which is sintered and thus as self-supporting as the second layer claimed by Applicant.

In the alternative, it would have been within the purview of one of ordinary skill in the art at the time of the invention to have recognized that composite filter structures could be formed by applying successive layers that have previously been sintered with a reasonable expectation of success. Absent a teaching of the criticality that the short metal fiber layer is sintered prior to applying a first porous metal layer thereto and joining by sintering, it would not provide a patentable distinction over the prior art.

Regarding claim 2, although Morimoto is silent to the maximum roughness depth as defined by the R_t value such as is described on p.4, lines 4-7 of the specification from Priority Document PCT/EP03/50691, such a maximum roughness depth would have been inherent due to the use of the short fibers. In the alternative, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed the use of fibers having fine dimensions that would ensure that the surface profile of the layer is uniform and contains little to no roughness depth so as to maintain the integrity, strength, uniformity and porosity of the formed layer.

Regarding claim 3, the short fibers in the layer of Morimoto would meet the limitation of being randomly oriented.

Regarding claim 4, a first porous metal layer of Morimoto would be sintered during the sintering step that joins the superposed composite layers.

Regarding claim 6, Morimoto teaches that the layers may comprise metal particulate (col. 3, ln. 35-43).

Regarding claim 7, the composite filter of Morimoto which is formed by joining the superposed layers would meet the limitation of a first layer and second layer comprising short metal fibers.

Regarding claim 8, Morimoto teaches that a reinforcing structure such as a metal net may be provided as a reinforcing structure (col. 6, ln. 23-60).

Regarding claim 9, Morimoto teaches that the layers may comprise metal particulate (col. 3, ln. 35-43).

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Regarding claims 11 and 12, Morimoto teaches the porosity of the formed layers may be between 60-80% (col. 7, ln. 1-9).

Regarding claims 14-15, Morimoto is silent to the use of the composite filter as a surface filtration medium or for filtration of liquids or gases. However, these are merely intended uses. Statements of intended use are not considered patentably distinguishing limitations. See Ex parte Masham 2 U.S.P.Q.2d 1647, 1648. In re Thuau 135 F.2d 344, 47 U.S.P.Q. 324. Application of Hack, 245 F.2d.246, 114 U.S.P.Q. 161.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto (US 4,729,871).

Morimoto teaches what is set forth above however it is silent to the limitation that a second layer containing short metal fibers which is self-supporting and sintered together is supplied with a first porous metal layer and subsequently sintered together. However, it would have been within the purview of one of ordinary skill in the art at the time of the invention to have recognized that the multilayer composite structures of Morimoto could be formed by wide variety processes including forming a sintered layer containing the short metal fibers prior to joining to another layer with a reasonable expectation of success. Absent a teaching of the criticality or showing of unexpected results from the layered filter structure being joined in the claimed sequence, it would not provide a patentable distinction over the prior art.

Claim 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto (US 4,729,871) in view of Nakagawa et al. (US 4,703,898).

Morimoto teaches what is set forth above but is silent to the second layer comprising a mixture of short metal fibers and long metal fibers such as is claimed.

Nakagawa teaches a method of forming sets of short metal fibers (col. 4, ln. 57-64). Nakagawa further teaches that the mixing short metal fibers with other materials such as longer fibers can exhibit advantageous properties such as a more uniform dispersion of materials, enhanced formability, excellent twisting with other fibers to form networked structures having good strength despite having large porosities, and improved sinterability (col. 5, ln. 35-61). Regarding the limitation that the long fibers are added in the amount claimed, it would have been within the purview of one of ordinary skill in the art to have added a sufficient amount of the long fibers to achieve the desired improvements of the layer properties.

Prior Art Made of Record but not Relied Upon

The following is a listing of prior art made of record but not relied upon in the rejections above:

GB'583 (GB 889,583) teaches that the use of short fibers having fine dimensions is extremely important in order to ensure the surface profile of the layer is uniform and contains little to no voids. The lack of voids serves so as to maintain the integrity, strength, uniformity and porosity of the formed layer (p. 3, ln. 9-43).

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Vaughn et al. (US 5,133,864) teaches layered filter structures which comprise layers porous fiber materials and/or particles (col. 3, ln. 15-18 and Figure1-4). Vaughn further teaches that filter structures may comprise woven maters, non-woven mates, filament windings, bonded fibers, aggregates of particles, or any structure which is suitable for position to receive a fluid on one side and release it out on the other side (col. 3, ln. 53-67).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason L. Savage whose telephone number is 571-272-1542. The examiner can normally be reached on M-F 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jason Savage
4-1-07



JENNIFER MCNEIL
SUPERVISORY PATENT EXAMINER

4/2/7